World's first patented Hybrid torque driver. Affordable, flexible system that can replace up to 8 conventional screwdrivers.

> HD-Series Hybrid Torque Control System

> > HDC-401 Intelligence Digital Spield & Torque Con

> > > mountz

Innovation from the torque tool specialists® 🕬



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## World's first Hybrid torque control assembly system!



# **HD-Series**

Hybrid Torque Control System

**KEY FEATURES** Controller

tightening process.

electric screwdrivers.

(cable not ESD).

ports.

counting.

Forward/Reverse).

0 to 99 screws.

**Built-in Screw Counter** 

for 8 preset torque settings.

Selectable speed up to 1,700 rpm.

**Brushless Electric Screwdrivers** 

Programmable digital torque setting with memory

Real-time monitoring and torque control of the

Programming and monitoring with PC software.

Various models that range from 0.3 - 39 lbf.in

Electric Screwdrivers feature a high performance brushless motor design that provides durability

and reduces the standard maintenance costs for

ESD housing and bit tip control to 1 ohm,

Low inertial force provides smooth reaction-less

operation with little G force to assembled parts.

25P I/O interface to a PLC or 8 direct sensor

Hybrid systems can be "Daisy Chained" together

for screw counting in a master/slave scenario.

Sensor ports for preset selection and screw

Input / Output for PLC (Excludes Run,

Detection of fastening error and displays error condition.

Visual assembly fastener count (count up or down), including total count.

Detects - cross threading, omissions, unfinished rundowns and cycle complete.

Real time monitoring by PC program.

Input via sensor ports for presets.

Low noise, vibration and maintenance.

I/O Interface & Settings

Programmable multi-sequence operation.

Mountz introduces the Hybrid Torque Control System, a revolutionary change in repeatable screw fastening technology. The patented HD-Series Torque Control System is the world's first torque control tool using both air and electric power to set and control torque. The HD's precise pneumatic pressure sensor and patented algorithm allow for precision digital torque selection. It provides realtime monitoring and torque control of the tightening process. It provides repeatability of the torque applied to screws, regardless of joint characteristics and frictional differences in actual applications.

#### Key Benefits

| Productivity/<br>Flexibility | Increase productivity with one tool instead of 2 - 8 tools. Perfect for cell based manufacturing environments, change torque via front panel, PLC or direct connection to I/O on controller. |
|------------------------------|--|
| Quality                      | Visual digital torque & speed control. Built in screw counter, error detection, fastening strategy setting and customized software package provide documented fastening and control.         |
| Cost                         | Less than half the cost of conventional DC control tools -<br>state of the art technology at a fraction of the price. Replace<br>2 - 4 tools with 1 Hybrid system.                           |

## Screw Counting Selections

Auto. Start (Continuous on). Start Pulse with time limit. Start Pulse and Finish pulse.

#### Preset Parameter Settings

Three selectable units of measure: Lbf.in, N.m, Kgf.cm

Selectable settings for Torque, Speed, Min & Max Angle, and Soft Start time.

Maximum angle control and verification Minimum angle control and error reporting

#### Motor Run Time Limits

Motor run time limits, forward and reverse, Motor stall time limit. Sleep time. Motor acceleration for soft start.

#### LED Display selections

Preset and Speed. Preset and Torque. Count setting and remaining screw count. Count setting and remaining screw count (Idle) + Preset and Torque (Running). Count setting and remaining screw count + Preset and Torque (Alternating).

#### Output signal types

Count complete Torque up and Count complete. Alarm, screw missing.

HD-Series



### BRUSHLESS ELECTRIC SCREWDRIVER

| (use wit  | IN HDC401     | Controlle | Torqu      | ie Ranges    | R    | PM  | Grip           |                    |            |          |
|-----------|---------------|-----------|------------|--------------|------|-----|----------------|--------------------|------------|----------|
| Model     | Driver Type   | Item #    | lbf.in     | cN.m         | High | Low | Dia.           | Length             | Drive Size | Weight   |
| HD150-A   | Lever Start   | 145741    | 4.4 - 13   | 49.1 - 147   | 1700 | 500 | $1 \ ^{1}/4"$  | 9 2/3"             | 1/4" F/Hex | 15.5 oz. |
| HD150P-A  | Push-to-Start | 145742    | 4.4 - 13   | 49.1 - 147   | 1700 | 500 | $1 \ ^{1}/4"$  | 9 2/3"             | 1/4" F/Hex | 15.5 oz. |
| HD220-A   | Lever Start   | 145743    | 6.1 - 19.1 | 68.7 - 215.8 | 1250 | 400 | $1 \ 1/4"$     | 9 2/3"             | 1/4" F/Hex | 16.2 oz. |
| HD220P-A  | Push-to-Start | 145744    | 6.1 - 19.1 | 68.7 - 215.8 | 1250 | 400 | $1 \ ^{1}/4"$  | 9 <sup>2</sup> /3" | 1/4" F/Hex | 16.2 oz. |
| HD450-A   | Lever Start   | 145745    | 8.7 - 39   | 98.1 - 441.4 | 600  | 300 | $1 \ ^{1}/4"$  | 9 <sup>2</sup> /3" | 1/4" F/Hex | 18 oz.   |
| HD-450P-A | Push-to-Start | 145746    | 8.7 - 39   | 98.1 - 441.4 | 600  | 300 | $1 \ ^{1}/4$ " | 9 2/3"             | 1/4" F/Hex | 18 oz.   |

#### BRUSHLESS ELECTRIC SCREWDRIVER (use with HDC30i Controller)

| <b>、</b> |             |        | Torq      | ue Ranges  | RI   | PM  | Grip        |        |            |         |
|----------|-------------|--------|-----------|------------|------|-----|-------------|--------|------------|---------|
| Model    | Driver Type | Item # | lbf.in    | cN.m       | High | Low | Dia.        | Length | Drive Size | Weight  |
| HD012-E  | Lever Start | 145747 | 0.3 - 1   | 3 - 11.7   | 1100 | 500 | $1^{-1}/8"$ | 7 7/8" | 4mm HIOS   | 7.8 oz. |
| HD025-E  | Lever Start | 145748 | 0.7 - 2.1 | 7.8 - 24.5 | 1100 | 500 | $1^{-1}/8"$ | 7 7/8" | 4mm HIOS   | 7.8 oz. |
| HD035-E  | Lever Start | 145749 | 0.9 - 3   | 9.8 - 34.3 | 1100 | 500 | 1 1/8"      | 7 7/8" | 4mm HIOS   | 7.8 oz. |

HDC40i CONTROLLER Model: HDC40i Hybrid Controller

Item # 145740 For driver models: HD150, HD220 & HD450

#### HDC30i CONTROLLER

Model: HDC30i Hybrid Controller Item # 145739 For driver models: HD012, HD025, & HD035



Increase productivity with one tool instead of 3-4 tools. The convenience of selecting the control settings with the touch of a button and offering built-in error proofing systems, adds value to the quality control process.



GENERAL SPECIFICATIONS (Both Models)

Input (Air Pressure): Min 4.5 Bar (62.26 PSI) / Max 6 Bar (87 PSI)

Angle Control: 0.1 - 10 turns

Preset Parameters:

Torque, Speed, Soft Start & Angle in 8 preset numbers

Auto detection of the connected driver: Auto detection of the offset value from the EEProm on the driver

Error display: Error display by code no. in system, communication & pattern error group

Fastening Quality Control: OK/NG monitoring of screw fastening by preset pattern of angles, times

Screw Counter: Save the total screw number, and monitoring the number of OK fastening screws. The controllers can be "Daisy Chained" together for screw counting in a master/slave scenario.

PC based program for parameter settings, monitoring and real time output

#### HDC40i SPECIFICATIONS

| Input (Electric): AC120VC ~ 220V, 50-60Hz |
|---|
| Output (Electric): DC40V, 3A              |
| Fuse: AC250V 10A                          |
| Dimension (WxLxH): 3 3/4" x 8 3/4" x 5"   |
| Weight: 4.6 lbs                           |

Preset selection capability: Front panel, direct sensor ports or 25P I/O

#### **HDC30i SPECIFICATIONS**

Input (Electric): AC120VC 220V, free voltage Output (Electric): DC30V, 2A Fuse: AC250V 3.15A Dimension (WxLxH): 3 <sup>1</sup>/<sub>2</sub>" x 7 <sup>1</sup>/<sub>8</sub>" x 5" Weight: 3.5 lbs

Preset selection capability: Front panel or 25P I/O

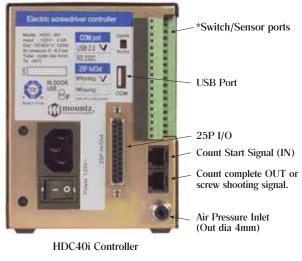


F1 Button Preset number UP

Torque # up

-1 count

F2 Button P51 "1" (counter) selected: Delete 1 count (-1) P51 "2" (FEEDER) selected:



NOTE! \*Switch/Sensor ports only available with HDC40i Controller.

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ISO 9001 and ISO 17025 Company

|       | Ser.             |            |           | making prom  |          | Inclusion                        |
|-------|------------------|------------|-----------|--|----------|----------------------------------|
| 1     | 43 (1+1)         | 1000 1001  | 0.0 577   | 0.0 tjene  | 0 10741  | • 11P                            |
| 1     | 7.0 1071         | 1000 실러야   | 00 100    | 0.0 4000   | 0 Are!   | <ul> <li>4</li> <li>5</li> </ul> |
| 4     | au giff          | 1000 3971  | 0.0 201   | 00 mm  | 0 200+)  | 0 HP                             |
| 4     | 10.0 11-4        | 1000 7     | 00 HP3    | 1 84 Hain  | · · ·    | a 354                            |
| 8     | 11.0 g[[P]]      | 1000 1071  | 0.0 257.0 | 0.0 (0000  | 9 tilter | 0 1                              |
|       | 120 10 Pt.       | 1000 1     | 0.0 1     | 0.0 SPIN   | I Brai   | 1.20                             |
| 1     | 14.0 <u>SEPT</u> | 1000 2011  | 0.0 1970  | 0.0 55767  | 8 - HFar | 1 B B                            |
|       | 150 (SPE)        | 1000 10710 | 0.0 200   | 0.0 ±1   | 0 10-41  | 0 11                             |
| Hut I |                  |            | The state | 113<br>113<br>114<br>114<br>115<br>115<br>115<br>115<br>115<br>115 |          |                                  |

#### THE HDC Controller enables an ability to define various fastening parameters.

Units of measure, Lbf.in, Kgf.cm and Nm 6 preset parameter settings & 8 preset torque settings Maximum angle control and verification Minimum angle control and error reporting



| E complete         | NO Cost  | Model States |
|--------------------|----------|--------------|
| 5 complete         | 1 6 2    | HD220 A      |
|                    | 2 5 图    | HD450-A      |
|                    | 5 5 2    | HD116-A      |
|                    | 4 1 2    |              |
|                    | 8 1 1 1  |              |
| HD220-A            | 0 1 2    |              |
|                    | 7 1 2    |              |
| unt Speed Torque   | 1 1 2    |              |
| 5 1000 6.5         | <u>.</u> |              |
|                    | 1        | SAVE         |
| 10 N               |          | 1            |
| (a) START (a) STOP | 12       | E SELECT     |

Screw count monitoring in real time. Using a screw counter is like putting the eyes and ears of a quality control manager where they are needed most - right on the assembly area. Screw counters verify that all fasteners have been installed and were seated to the tools preset torque setting. These units take the control of the assembly process out of the operator's hands.

#### **MINI AIR COMPRESSOR**

Oil free mini air compressor with auto pressure switch with one-touch male connector (for tube OD 8mm), unit can support 1 - 4 Hybrid Controller Systems

1/8HP, Start at 70PSI, Stop at 90PSI Flow: 20LPM Weight: 9.5 lbs. 120V

Model: MAC-20 Item # 145737



The HDC40i & HDC30i Hybrid Controllers require a constant PSI regulation. Should be used with MAC-20.

#### **ACCESSORIES**

| Item # | Model  |
|--------|--|
| 773816 | One-Touch Male Connector (1/4 RPT, Tube OD 4mm)                |
| 773817 | One-Touch Male Connector (1/4 RPT, Tube OD 8mm)                |
| 773818 | One-Touch Union Tee (Tube OD 8mm)                              |
| 773819 | One-Touch Straight Union (Tube OD 8mm)                         |
| 773820 | One-Touch Plug-in-Reducer, (8mm Plug to 4mm Tube)              |
| 773821 | Tubing - Polyurethane Clear (4mm OD X 2.5mm ID, 20 Meter Roll) |
| 773822 | Tubing - Polyurethane Clear (4mm OD X 2.5mm ID, 33 Meter Roll) |
| 773823 | Tubing - Polyurethane Clear (8mm OD X 5mm ID, 20 Meter Roll)   |
| 773824 | Tubing - Polyurethane Clear (8mm OD X 5mm ID, 33 Meter Roll)   |



Cable End

Driver End

**HD-Series** 

